REMARKS

By the above amendment, claims 1, 3 and 6 have been canceled without prejudice or disclaimer of the subject matter thereof with dependent claim 4 being written in independent form incorporating the features of parent claim 1 therein. Additionally, independent claim 8 has been amended to recite the feature that an intermediate layer coupling field showing a magnitude of ferromagnetic coupling between the ferromagnetic pinned layer and the soft magnetic free layer is substantially zero, corresponding to the feature as set forth in independent claim 4. It is noted that an informality in claim 8 has been corrected and the dependency of claims 9 and 11 and an informality in claim 13 have been corrected with new dependent claims 15 - 18 being presented reciting the feature that the non-magnetic conductive oxidized stopper layer is made of Cu, as described at page 5, line 9 of the specification, for example.

As to the rejection of claims 1, 3 - 4 and 6 - 14 under 35 USC 102(e) as being anticipated by Pinarbasi (US 6,268,985) and the rejection of claim 1 under 35 USC 102(e) as being anticipated by Hasegawa et al (US 6,643,107), such rejections are traversed insofar as they are applicable to the present claims, noting that as to the rejection based upon Hasegawa et al, such rejection has been obviated by the cancellation of claim 1.

As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing

descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

In accordance with the present invention, a non-magnetic and conductive oxidized stopper layer is provided in a particular location in the layered structure of the magnetic head and as described in the paragraph at the bottom of page 5, the thickness of the non-magnetic high conductance oxidized stopper layer is selected such that the interlayer coupling field is reduced to zero, it being recognized that the interlayer coupling field changes along with the thickness of the conductive layer and by selecting the thickness of the non-magnetic high conductance oxidized stopper layer so that the interlayer coupling field is substantially reduced to zero, a lower of sensitivity caused by increase in the interlayer coupling field can be reduced. Applicants note that such features are recited in the independent and dependent claims of this application with the newly presented independent claims reciting the feature that the non-magnetic and conductive oxidized stopper layer is made of Cu. As noted above, each of independent claims 4 and 8 recite the feature of a non-magnetic and conductive oxidized stopper layer and that an intermediate layer coupling field showing a magnitude of ferromagnetic coupling between the ferromagnetic pinned layer and the soft magnetic free layer is substantially zero, with dependent claims 11 and 13 further reciting the feature that the non-magnetic and conductive oxidized stopper layer has a thickness so that the intermediate layer coupling field is substantially zero and the newly added dependent claims 15 - 18 further defining the non-magnetic and conductive oxidized stopper layer being made of Cu.

Turning to the rejection based upon Pinarbasi, while the Examiner utilizes the language of the claims in the middle part of page 3 of the office action, for example:

> "wherein an intermediate layer coupling field showing a magnitude of ferromagnetic coupling between the ferromagnetic pinned layer and the soft magnetic free layer is substantially zero (as shown in Fig. 15, for instance, i.e., an intermediate layer coupling field showing a magnitude of ferromagnetic coupling between the ferromagnetic pinned layer and the soft magnetic free layer would be substantially zero due to the structure depicted in Fig. 15 and accompanying detailed description thereof [as per claim 4 and 6-7]" (emphasis added),

applicants submit that the disclosure of Pinarbasi does not provide a description concerning the intermediate layer coupling field, irrespective of the contentions by the Examiner. Furthermore, while the Examiner contends that "ruthenium" is a non-magnetic and conductive oxidized stopper layer, as admitted by applicants' own disclosure in lines 8 - 10 on page 5, for instance, applicants submit that there is no disclosure in Pinarbasi that Ru, as utilized in Pinarbasi, is a non-magnetic and conductive oxidized stopper layer, as recited in the claims of this application and it is improper to utilize what applicant has taught against the teacher. See the decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge". The court pointed out:

> The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination

> of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Accordingly, applicants submit that contrary to the requirements for a disclosure in Pinarbasi of each of the recited features of the claims in order to support a rejection under 35 USC 102 (see, In re Robertson, supra), the disclosure of the claimed features is not found in Pinarbasi, and applicants disclosure in the present specification of elements which may be utilized to provide a non-magnetic and conductive oxidized stopper layer, does not permit the Examiner to contend that a similar element operates in the manner claimed. Furthermore, while Pinarbasi provides that the Ru layer was purposely kept relativey thin at 10Å since it is conductive and will shunt a portion of the sense current in that a shunting of the sense current reduces the effectiveness of the spin value (column 8, lines 61 - 64 of Pinarbasi), such disclosure is not a disclosure of selecting a thickness of the non-magnetic and conductive oxidized stopper layer so that the intermediate layer coupling field is substantially zero, as recited in the claims of this application. Again, applicants submit that merely utilizing the words of the claims and attributing these features to the structure of Pinarbasi does not result in a disclosure in compliance with 35 USC 102. Thus, applicants submit that the independent and dependent claims of this application patentably distinguish over Pinarbasi in the sense of 35 USC 102 and should be considered allowable thereover.

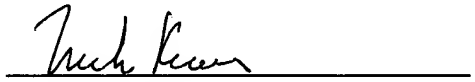
Applicants note that by the present amendment, dependent claims have been presented which particularly define the non-magnetic and conductive oxidized stopper layer arranged in the manner defined as being made of Cu and applicants note that the non-magnetic high conductance oxidized stopper layer made of Cu forms a different kind of electric geometry called quantum well by attacking it on a

ferromagnetic metal layer and enables the interlayer coupling field to be substantially zero, which features are not disclosed by Pinarbasi in the sense of 35 USC 102. Applicants further note that other dependent claims recite additional features which are also not disclosed by Pinarbasi in the sense of 35 USC 102 irrespective of the Examiner attributing such features to the structure of Pinarbasi. As such, applicants submit that the dependent claims recite further features not disclosed by Pinarbasi such that all claims patentably distinguish over Pinarbasi and should be considered allowable thereover.

In view of the above amendments and remarks, applicants submit that all claims present in this application should now be in condition for allowance and issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (501.39395X00) and please credit any excess fees to such deposit account.

Respectfully submitted,



Melvin Kraus
Registration No. 22,466
ANTONELLI, TERRY, STOUT & KRAUS, LLP

MK/jla
(703) 312-6600